

ERDEY, L.

Report of the work of the Chemical Section; also, remarks by G. Schay and others. p. 3. KOZLEMENYEI. Budapest. Vol. 7, no. 1, 1955.

SOURCE: East European Accessions List (EEAL), LC, Vol. 5, No. 2, Feb. 1956

ERDEY, L.

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16. Thermal analysis of precipitates. I. Metal oxalate precipitates. II. Aluminum hydroxide precipitates. (In German) L. ERDEY, P. PAULI. *Acta Chimica Academiae Scientiarum Hungaricae*, Vol. 7, 1955, No. 1-2, pp. 27-36, 38 figs.

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Chem

The author finds application of differential thermal analysis and thermogravimetry for the investigation of the thermal properties of barium, strontium, calcium, magnesium, zinc and manganese oxalate precipitates resulted in many advantages. By the first method it is possible to record extremely small changes in weight whereas thermogravimetry yields reliable data for quantitative deductions. The thermogravimetric measurements were carried out on a thermobalance made in the Institute. It was found that the carbon dioxide formed during the thermal treatment of the metal oxalate precipitates plays an important role since it may decrease the reaction rate and increase the decomposition temperature. By employing a similar method it was established that the structure and composition of aluminum hydroxide precipitates was barely influenced by the quality of the precipitating agent and by the concentration of foreign ions in the solution. The slower the rate of precipitation and the weaker and hotter the solution (conditions more favourable for crystal formation) the closer the structure of the precipitate approaches that of the gibbsite molecule. Under contrary conditions an amorphous gel-type precipitate was obtained.

BM

ERDEY, LASZLO.

AT
Differential thermogravimetry (Lazlo Erdely, Eszter
Paulik, and Jeno Paulik (Budapest, Hungary)
Matyás Tudományok Akad. 1974 14/10
Közlönyei 7, 85-86 (1975) 54-55 40-41

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Erdey, L.

21. Data on the kinetics of the decomposition of hydrogen peroxide in alkaline medium. (In German) L. Erdey, I. Inczedy. *Acta Chimica Academiae Scientiarum Hungaricae*. Vol. 7, 1955, No. 1-2, pp. 93-115, 7 figs., 3 tabs.

Based on a theoretically derived reaction equation the decomposition process proved to be of the second order. Experimentally however the second order was found only at the pH value of maximum decomposition. The activation energy of the decomposition was calculated from the rate constants established at different temperatures for the pH values of maximum decomposition. The activation energy proved to be independent of the dimensions of the enclosing glass surface. A linear relationship was found to exist between the decomposition rate and the surface area below pH 12. Above this value the decomposition rate varies as a function of the square root of the surface. The alkaline decomposition of hydrogen peroxide was initiated by a starting period possibly due to the formation of a hypothetical intermediate. It is the deformation of this intermediate product on the glass surface which actually yields the well known decomposition products.

Chem

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ERDEY, L.

✓ Calcium determination in alumina. L. JANKOVITS AND L. ERDEY. *Acta Chim. Acad. Sci. Hung.* 7 [1-2] 155-83 (1955) (in German).—The possibilities of determining the Ca content in alumina, particularly in bauxite, were examined for the purpose of improving present methods and developing new ones. Reliable determinations were made by precipitating the Ca with oxalate, potassium nickel nitrite, picrolonic acid, naphthalhydrox-
amic acid, and chloranilic acid or by titration with Komplexon. The most accurate methods are the direct colorimetric measurement and the colorimetric determination in the form of naphthalhydroxamate, 0.001%. 17 references. M.H.A.

1325. Determination of vanadium by means of reducing volumetric solutions. I. Direct determination of vanadium with ascorbic acid. L. Erdey, E. Bodor and I. Buzis (Inst. Gen. Chem., Hungarian Univ., Budapest). *Acta Chim. Acad. Sci. Hung.* 1958, 7 (3-4), 277-281. In this rapid method described the end-point of the titration is shown by Variamine blue. A solution containing 0.05 to 0.2 g of V_2O_5 is neutralised against phenolphthalein with N NaOH, then acidified with N H_2SO_4 (10 ml), and made up to 100 ml with water. This solution is titrated with 0.1 N ascorbic acid until the colour changes from brown through green to blue-green. A solution of Variamine blue (1 per cent, 0.5 ml) is added, when the colour changes to dark violet, and titration is continued until the colour changes to pale blue. The end-point is confirmed by adding one drop of indicator to the solution. The titration must be completed in 3 min. The accuracy of the method is within ± 0.5 per cent.

II. Indirect determination of vanadium with ascorbic acid. L. Erdey, I. Buzis and E. Bodor. *Ibid.*, 1958, 7 (3-4), 287-292. A method is described for the indirect determination of V^{5+} by means of ascorbic acid and ferrous sulphate solution free from Fe^{3+} . The titration is carried out quickly in cold solution slightly acidified with HCl. The end-point is indicated by Variamine blue. A solution containing 0.1 to 0.5 g of V_2O_5 is neutralised with NaOH to phenolphthalein, N HCl (15 ml) and 0.1 N ferrous sulphate solution (5 ml) from which Fe^{3+} have been removed by a cadmium reductor) are added and the solution is diluted to 100 ml with water. The solution is titrated with 0.1 N ascorbic acid as described above. The accuracy of the method is within ± 0.1 per cent.

III. Determination of vanadium with a ferrous salt. L. Erdey, K. Vigh and E. Bodor. *Ibid.*, 1958, 7 (3-4), 293-303. The method has been applied to the determination of vanadium in ferrovanadium, in steel, in vanadium pentoxide, and in vanadium mud. Ferric ions are bound by either H_3PO_4 , NaF or $Na_2P_2O_7$. For the determination of the vanadium contents of chromium-containing steels, the samples are oxidised with $KBrO_3$, when only the vanadium is oxidised.

Procedure for vanadium pentoxide. A sample (0.5 g) is dissolved in dilute H_2SO_4 (1:3; 10 ml) and the solution is made up to 100 ml with water. A 50-ml portion of this solution is added to 31 per cent H_2O_2 (5 ml), and the excess of peroxide is destroyed by boiling for a few minutes. The cooled solution is treated with NH_4Cl (5 g) and 0.1 N $KBrO_3$ solution (25 ml) and boiled for 15 min. The solution is allowed to cool and $Na_2P_2O_7$ (4 g) is added. The resulting solution is titrated with 0.1 N $FeSO_4$ solution to Variamine blue.

C. A. SLATER

ERDEY, L.; VIGH, K.; BODOR, E.

ERDEY, L.; VIGH, K.; BODOR, E. Determination of vanadium using reducing measuring solutions. III. Determination of vanadium with an iron (II) salt as a measuring solution. In German. p. 293.

Vol. 7, no. 3/4, 1955
ACTA CHIMICA
SCIENCE
HUNGARY

So: East European Accessions, Vol. 5, No. 9, Sept. 1956

ERDEY, L.; GEGUS, E.; KOCSIS, E.

ERDEY, L.; GEGUS, E.; KOCSIS, E. Spectral analysis of solutions using the
cup electrode method. In German. p. 343.

Vol. 7, no. 3/4, 1955
ACTA CHIMICA
SCIENCE
HUNGARY

So: East European Accessions, Vol. 5, No. 9, Sept. 1956

ERdey, 2

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1. Colorimetric determination of iodine with the use of
 Varianine Blue. L. Erdely and E. Szabadvary (Tech.
 Univ., Budapest). *Magyar Tud. Akad. Sci. Hung.* 8, 191-202
 (1955) (in German) (English summary). - Attempts to de-
 velop a colorimetric I detn. (e.g., the reaction of I with
 starch) were so far not successful. However the blue color of
 I with Varianine Blue (4-amino-4'-methoxydiphenylamine)
 could be developed into a colorimetric detn. of great sensi-
 tivity. **Procedure:** Transfer the weakly acid soln. contg.
 25-500 γ of I dissolved in not more than 25 ml. H_2O to a 50-
 ml. volumetric flask. Add an acetic acid-acetate buffer
 soln. of pH 3 and finally 2 ml. of a 1% soln. of Varianine
 Blue. After waiting 2 min., measure the color with a Pul-
 frich photometer and filter S 67 vs. water. A pH of 3 favors
 not only greater color stability but prevents interference by
 iodide. The absorption curve follows Beer's law quite
 closely over a pH range of 0-5, except for I concns. under
 12 γ /ml. Concns. of 0.5 γ /ml. I could be accurately detd.
 by this colorimetric method. Oxidizing as well as reducing
 substances must be absent, also Pb, Hg, Bi, CN, oxalate,
 and borate. 14 references. Ernst M. Goldstein

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ERLEY, L

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CT

Determination of mercury by ascorbinometry. I.
Erley and I. Huzds (Tech. Univ., Budapest). Acta Chim.
Acad. Sci. Hung. 8, 203-70 (1965) [in German] (English
summary).—In a previous publication (cf. C.A. 49, 4440c)
the ascorbinometric detn. of Ag was described. As the
literature mentions no detn. of Hg⁺⁺ ions based on a reduc-
tion reaction and an indicator, attempts were made to use
the ascorbinometric Ag detn. method also for Hg⁺⁺. If
HgCl₂ solus. were employed the reduction with ascorbic
acid went only to HgCl. As reduction to Hg metal was
desirable Hg(NO₃)₂ solus. were used because in this case re-
duction to Hg took place. Procedure: To the Cl-free solu-
contg. about 60-800 mg. Hg⁺⁺ ions add NaOH until HgO
begins to ppt., then acidify with 30 ml. 0.1N HNO₃. Dil.
the clear soln. to 100 ml. and heat to about 60°. As indica-
tor for the following titration use a 1% aq. soln. of Vari-
amine blue. Add 0.1 ml. of the indicator and titrate with
0.1N ascorbic acid until the soln. is colorless. To avoid a
strong acidity (pH should be between 2 and 3) it is advis-

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Determination of mercury...

able to add towards the end of the titration 1 ml. of a 20% NaOAc soln. as buffer. Results of ascorbimetric Hg titrations are tabulated and compared with the results of standard titrimetric and gravimetric data. The agreement is excellent. Typical interfering ions are Ag, Ni, Cu, and org. compounds like tartaric, citric, and oxalic acid. If Hg²⁺ is present, oxidation to Hg²⁺ with 0.1N KMnO₄ soln. should precede the titration. A soln. of HgCl₂ is first reduced to Hg with a large excess of ascorbic acid in the presence of 2-3 g. KNO₃ at water-bath temp. Filter off the reduced Hg, wash and redissolve in 10 ml. HNO₃. The Hg is now present as Hg(NO₃)₂ and can be titrated as above.

Ernst M. Gohlstein

2/2

see

Erdey, László

13

4285* Variamin Blue B as a Colorimetric Reagent. Variaminbék (4-amino-4'-methyl difenilamin) mint kolorimetriás reagens. II. Determination of Iodine. Jód meghatározás. (Hungarian.) László Erdey and Ferenc Szabadivry. Magyar kémiai folyóirat, V. évf. no. 11, Nov. 1935, p. 341-345. CH

①

A color reaction suitable for the determination of iodine in solution of 0.5-13 µg. l. per ml. between the pH range of 1-5. Sensitivity of method. Tables, graphs. 15 ref.

AD 24

ERDEY, L.; BUZAS, L.

ERDEY, L.; BUZAS, L. Easily produced analytic glass filters. p. 443.

Vol. 611 No. 12, Dec. 1955.

MAGYAR KEMIAI FOLYKÖRLET

SCIENCE

Budapest, Hungary

So: East European Accession, Vol. 5, No. 5, May 1956

~~Erdey, Laszlo~~
ERDEY, Laszlo

HUNGARY/ Analytical Chemistry. General Problems. G-1

Abs Jour: Referat. Zhur.-Khimiya, No. 8, 1957, 27137 K.

Author : Laszlo Erdey.

Title : Introduction into Chemical Analysis. Part I.
Qualitative Analysis. Textbook for Universities.
4th Edition.

Orig Pub: Budapest, Tankonyvkiado, 1956, VI, 281 l.,
28.60 ft.

Abstract: no abstract.

Card 1/1

HUNGARY/Analytical Chemistry - Analysis of Inorganic
Substances.

E.

Abs Jour : Ref Zhur - Khimiya, No 9, 1958, 28486

Author : Erdely, L. and Banyai, E.

Inst :

Title : The Utilization of Exchange Precipitation Reactions in
Analytical Chemistry. II. The Determination of the
Chloride Ion.

Orig Pub : Magyar tud akad Men tud oszt koezl, 7, No 2, 175-186
(1956) (in Hungarian)

Abstract : See RZhKhim, 1957, 1257.

Card 1/1

51

HUNGARY/Analytical Chemistry - Analysis of Inorganic
Substances.

E.

Abs Jour : Ref Zhur - Khimiya, No 9, 1958, 28482

Author : Laszlo, E. and Banyai, E.

Inst : -

Title : The Utilization of Exchange Precipitation Reactions in
Analytical Chemistry. III. The Determination of Sulfate
and Sulfide Ions.

Orig Pub : Magyar tud akad Kem tud oszt koezl, 7, No 2, 187-198
(1956) (in Hungarian)

Abstract : See RZhKhim, 1957, 8534.

Card 1/1

HUNGARY/Analysis of Inorganic Substances.

G-2

Abs Jour: Ref Zhur-Khimiya, No 6, 1957, 12583

± 0.104 ml. Cu, Bi and Co interfere in the molar ratio 1 : 1, Cd, Al and Zn interfere. F^- and PO_4^{3-} retard the basic reaction, NO_3^- (at 1 : 10 $NaNO_3$) does not impede. The possibility of titrating the solution of complexon III with a solution of Fe^{3+} in the presence of variamine blue in the region of pH 3 - 4.5 at 50° was established. The error is 1 - 2%.

Card 2/2

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ERDEY, L

✓ The use of precipitate exchange reactions in analytical chemistry. I. B. Bányai and L. Erdely (Tech. Univ., Budapest). *Acta Chim. Acad. Hung.* 8, 383-94 (1958) (in German) (English summary).—A discussion is given of theoretical and math. considerations regarding the class of chem. reactions in which the anion to be detd. is reacted with an insol. ppt. to form another poorly sol. ppt. and an anion that can be detd. easily by titrimetric means. Reactions which show conversion quotients of 1.0 or near 1.0 are suited for analytical purposes. Conversion quotients possessing a value less than 1.0 indicate an incomplete exchange reaction; quotients greater than 1.0 indicate excessive soly. of the exchange ppt. II. Determination of chloride ions. L. Erdely and B. Bányai. *Ibid.* 395-408.—The detn. of Cl^- by the addn. of insol. Ag_2CrO_4 followed by the titration of the liberated CrO_4^{--} is one of the well known examples of the ppt. exchange reaction principle. Other ppts. that have been used in this detn. are $\text{Ag}_2\text{C}_2\text{O}_4$, AgIO_3 , $\text{Hg}_2(\text{IO}_3)_2$, and $\text{Hg}_2\text{C}_2\text{O}_4$. Conversion quotients of the above ppts. with reference to the detn. of Cl^- are tabulated. The influence of pH and concn. is discussed. The following values for each of the ppts. indicate, resp., the min. Cl^- concn. limit, the % error, and the permissible pH range: Ag_2CrO_4 , 20 millimoles/l., -0.01 to +1.0%, 4.5-7; $\text{Ag}_2\text{C}_2\text{O}_4$, 20 millimoles/l., 0.0 to +1.0%, 2.0-7; AgIO_3 , 2.0 millimoles/l., -0.42 to +1.0%, 1.0-7; $\text{Hg}_2(\text{IO}_3)_2$, 1.0 millimoles/l., -0.34 to +1.0%, 0.0-7; $\text{Hg}_2\text{C}_2\text{O}_4$, 20 millimoles/l., -0.01 to +1.0%, 1.0-7. III. Determination of sulfate and sulfide ions. *Ibid.* 409-22.—The detn. of sulfate by the ppt. exchange principle with $\text{Ba}(\text{IO}_3)_2$, BaC_2O_4 , and BaCrO_4 is investigated. The conversion

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I. É. BÁNYAI AND L. ERDEY

quotients of the above ppts. with reference to SO_4^{2-} based upon their soly. products are reported. The influence of concn., pH, and the presence of alc. (to reduce soly.) is discussed. The liberated iodate and chromate is detd. iodometrically; the oxalate is detd. with KMnO_4 . The $\text{Ba}(\text{IO}_3)_2$ exchange reaction in the water system is useful in the range 10-4 millimoles/l.; in a 4:1 H_2O -alc. mixt. it is useful in the range 1.5-1.0 millimoles/l. The BaCrO_4 system is useful down to 6 millimoles/l. and the BaCrO_4 system is useful in the range 20-1.0 millimoles/l. Sulfides can be detd. by the use of $\text{Ag}_2\text{C}_2\text{O}_4$ or PbC_2O_4 . With $\text{Ag}_2\text{C}_2\text{O}_4$ the method is useful through the range 40-4.0 millimoles/l.; with PbC_2O_4 the useful range is from 50 to 1.0 millimoles/l.

G. Dragt

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Hungary/Analytical Chemistry - Analysis of Inorganic Substances

G-2

Abs Jour : Referat Zhur - Khimiya, No 3, 1957, 8534

view of the very low solubility of III in neutral media, the reaction with III is carried out in a 0.1 N HCl solution with refluxing, NH_4OH is added until a faintly yellow color appears, and the CrO_4^{2-} determined after the separation of the precipitate from the filtrate. In agreement with theoretical calculations (RZhKhim, 1956, 78375), it has been established that the reaction with I can be applied to the determination of SO_4^{2-} only in the concentration range 4-10 mmol/liter; the error is less than 1%. When the solubility of I is lowered by the addition of alcohol, the range of application of the reaction is shifted to the 1-1.5 mmol/liter region. The reaction with I results in a 12-fold increase in the titer of the solution and is therefore suited for the determination of very small amounts of SO_4^{2-} in neutral, weakly acidic, or ammoniacal solutions in the narrow concentration range indicated. The reaction with II can be applied to the determination of SO_4^{2-} in neutral or ammoniacal solutions at concentrations ≥ 6 mmol/liter. The range of applicability of the reaction with III is from 1-20 mmol/liter SO_4^{2-} . I, II, and III are prepared by the reaction of BaCl_2 with KIO_3 , $(\text{NH}_4)_2\text{C}_2\text{O}_4$, and K_2CrO_4 . The

Card 2/3

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ERDEY, L.

The development of polarography in Hungary. In German. p. 17. (Acta Chimica, Vol. 9, No. 1/4, 1956, Budapest, Hungary)

SG: Monthly List of East European Accessions (EEAL) IC, Vol. 6, No. 8, Aug 1957. Uncl.

HUNGARY/Analytical Chemistry. Analysis of Inorganic
Substances.

E-2

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43045.

Author : Erdey L., Karsay A.

Inst : Hungarian Academy of Sciences.

Title : Amperometric Determination of Ions of Trivalent
Iron With Ascorbic Acid.

Orig Pub: Acta chim. Acad. sci. hung., 1956, 9, No 1-4, 43-48.

Abstract: It was found that aqueous solutions of ascorbic acid
(I) can be used in amperometric titration of Fe^{3+} at
concentrations as low as 0.001 M. On determination
of 1-2 mg Fe the error is less than 1% which is com-
mesurable with the accuracy of the other known methods.
The advantages of I in comparison with other titration
reagents are the ready preparation of a solution of I

Card : 1/2

K. R. DEY, A

A new thermal method: derivative thermogravimetry.
 L. Erdelyi, F. Paulik, and J. Paulik (Tech. Univ., Budapest).
Ann. Chim. Acad. Sci. Hung. 10, 61-67 (1953); (in German)
 (English summary); cf. C.A. 50, 3952c. — A thermogravi-
 metric app. is described and illustrated in which the sample
 under study is heated in an elec. oven; the temp. of the latter
 is increased at a const. rate. The sample is contained in a
 Pt crucible at the end of a rod, the lower end of which is
 attached to one side of an aperiodic balance. On the other
 side is suspended a magnet that is surrounded by a solenoid
 connected to a galvanometer. The deflection of the galvan-
 ometer is plotted with respect to time; it is proportional to
 the rate of change in wt. of the sample. Graphs are derived
 for $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$, $\text{Al}_2(\text{SO}_4)_3 \cdot 18\text{H}_2\text{O}$ (I), K alum (II), hydrazil-
 lite, artificial bohrilite (III), $\text{Al}_2\text{O}_3 \cdot \text{H}_2\text{O}$ (IV), $\text{Al}(\text{OH})_3$
 gel (V), MgCO_3 (in CO_2 atm.), Zn anthranilate (VI) (in
 CO_2 atm.), coal (in air and in N), beechwood (in N), and
 cellulose (in N) in the temp. range 0-1000°. I loses 3
 mols. H_2O at room temp., 12 mols. at 145°, and the remain-
 ing 3 mols. at 290°. SO_4 is lost at 840°. In II, 4 mols.
 H_2O are attached to K, 6 to Al, and one each to the SO_4
 ions. III, IV, and V are extensively discussed. VI loses
 half its org. content at 340°, probably forming α - C_6H_5
 COOZnNH_2 .

I. W. Lowenberg, Jr.

ERDEY L.

✓ 703. Lophine, a new chemiluminescent indicator.
 Erdely and L. Hozar (Hungarian Univ., Hungary),
Anal. Chim. Acta, 1960, 15 (4), 333-334 (in English).
 2.5-0.1% ethanolic or 1% acetic soln. of 2:4:6-
 triphenylimidazole (lophine) can be used as a chemi-
 luminescent indicator for the end point of redox
 titrations. Light is emitted in basic or oxidizing
 media and in the presence of a catalyst. It has
 the same pH range and is as sensitive to CO_2 as
 phenolphthalein. The acid soln. is titrated with
 N or 0.1 N base and, in addition to 1 ml of lophine
 soln., should contain a small amount of 3% H_2O_2
 and 3% $\text{K}_2\text{Fe}(\text{CN})_6$ soln. The accuracy is within
 $\pm 0.4\%$ for titrations of N soln. W. J. BAKER

PMK

2481. Compleximetric determination of iron in presence of Vanilino blue as indicator. L. Pál and G. Rády (Inst. Gen. Chem., Tech. Univ., Budapest, Hungary). Z. anal. Chem., 1956, 140 (4), 220-227. Vanilino blue is (with NaCl as solid diluent) a useful redox indicator for the compleximetric determination of Fe^{3+} at pH 1-7 to 3 and at room temp. Results on 5 to 30 ml of 0.01 N $FeCl_3$ are accurate to within ± 1 per cent and on 5 to 20 ml of 0.1 N $FeCl_3$ to within ± 0.4 per cent. Ammonium ions, Hg^{2+} , Cu, Se, Ba, Mg, K and Na (all in vol. ratio to Fe of 1:10) and Zn and Mn^{2+} (1:1) do not interfere, but Cu, Bi and Co (1:1) interfere. Acetate, Cl^- , NO_3^- and SO_4^{2-} do not interfere, but F^- and PO_4^{3-} do. Procedure. - Treat the sample of $FeCl_3$ with 10 per cent. aq. NH_2 until a slight permanent ppt. appears, and then adjust the pH to between 1.7 and 3 with 2 N formic acid (1 to 5 ml). Dilute the soln. to 100 ml, add the indicator, and titrate immediately with 0.05 M or 0.01 M EDTA (disodium salt), rapidly at first then dropwise to a yellow end-point.

J. P. STERN

ERdey, L.

6000

✓ Ascorbinometric determination of hexacyanoferrate(III)
(ferricyanide). L. ERdey and G. Syehla (Tech. Univ.,
Budapest). Z. anal. Chem. 180, 407-15 (1958).—Ferri-
cyanide reacts with ascorbic acid, $C_6H_8O_6$, to form ferro-
cyanide and dextrose, $C_6H_{12}O_6$. H^+ is liberated and must be
neutralized during the titration. The soln. is yellow at
first and gradually becomes colorless. The reaction takes
place only at pH 5-6. The 0.1N ascorbic acid reagent is
prepd. from 8.0 g. ascorbic acid/l. and distd. in a glass app.
The titer is obtained by taking 20 ml. of 0.1N $KHIO_4$ soln.
with 5 ml. of 2N HCl and a little KI and titrating the
liberated I almost completely, then adding a little NaOAc
and a knife-blade full of indicator mixt. (1 g. Variamine Blue-
600 g. NaCl), and then continuing until the blue color dis-
appears. The soln. must be standardized frequently. To
det. ferricyanide with ascorbic acid, first neutralize the
soln. to phenolphthalein, add 5 g. of NaOAc crystals and 1
ml. of 0.1% 2,6-dichlorophenolindophenol soln., and titrate
with 0.1N ascorbic acid. The original greenish yellow
soln. gradually turns to greenish blue. When near to the
end point, an azure-blue color appears and then, at the end
point, disappears on adding one drop of the titrant; 1 ml.
of 0.1N soln. = 21.20 mg. of $[Fe(CN)_6]^{+++}$ or 32.93 mg. of
 $K_3[Fe(CN)_6]$. The end point can also be detd. potenti-
metrically. 28 references.

W. T. Hall

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LADISLAUS ERDEY Ladislav Erdey

Complexometric titrimetric determination. Geza Erdey and Ladislav Erdey (Univ. Budapest). Z. anal. Chem. 152, 350-351 (1950). In acid soln. of Bi 1-(4-arsenophenylazo)-2-naphthol-3,6-disulfonate (I) gives orange-yellow ppt. with Sn(IV), U(VI), Th, Nb, rare earths, and Zr and sol. complexes with Th and Bi. The end point in the titration of a HNO₃ soln. (pH 2) of Bi with 0.002-0.05M I, sodium (ethylenedinitrilo)tetraacetate is shown by a change of I from red to yellow. If the concn. is low enough so the color of the indicator is not masked, Ag, Pb, Cu, Cd, Co, Ni, Mn, Zn, Al, Ca, Ba, Sr, Mg, Na, K, and NH₄⁺ do not interfere. The interference of Fe(III) is eliminated by reduction with ascorbic acid. Th, Zr, La, and U(VI) interfere by forming colored compds. with I. Cl⁻, PO₄³⁻, and SO₄²⁻ ppt. basic Bi salts, and F⁻ complexes Bi. In the range 2-200 mg. of Bi, the error is 0.3%. K. G. Stone

ERDEY, L

1407. Determination of zinc and lead ions with ascorbic acid. 71. Erdely and L. Polos (Inst. for Allgemeine Chem., Tech. Univ., Budapest, Hungary). Z. anal. Chem., 1956, 153 (6), 401-411.—Zinc or lead ions can be determined volumetrically by the addition of excess of $K_3Fe(CN)_6$ and titration with standard ascorbic acid. The $Fe(CN)_6^{4-}$ liberated causes pptn. of $K_2Zn_3[Fe(CN)_6]_2$ or $Pb_3Fe(CN)_6$, and the excess is detected potentiometrically (platinum and S.C.E.) or with a redox indicator. Oxidising and reducing agents and compounds that give ppt. with Zn or Pb interfere. The accuracy is within $\pm 0.5\%$. Procedure for Zn—To an aq. soln. (containing 20 to 200 mg of Zn) add 20% $(NH_4)_2SO_4$ soln. (10 ml) and 2 N H_2SO_4 (2 ml) and 1% Veramine blue II soln. (0.2 to 0.5 ml), heat to 60° and add 0.1 M $K_3Fe(CN)_6$ (1 or 2 ml). Titrate with 0.1 N ascorbic acid until the soln. is colourless; add more 0.1 N $K_3Fe(CN)_6$ (1 or 2 ml at a time) and continue the titration as many times as is necessary to attain a stable end-point. Procedure for Pb—With samples containing 0.1 to 1 g, proceed as for Zn, but with the use of formate or acetate buffer of pH 3 (10 ml) instead of $(NH_4)_2SO_4$ and H_2SO_4 .
A. R. ROGERS

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SM

ERDEV, L

✓ 1458. The determination of zinc and lead ions with potassium ferrocyanide. L. ERDEV and L. PÓLOS (Inst. for Analytical Chem., Technical Univ., Budapest, Hungary). *Z. anal. Chem.*, 1958, 153 (6), 411-415.
—Zinc or lead can be determined volumetrically by titration with standard ferrocyanide, in the presence of a trace of ferricyanide, with a redox indicator. The accuracy is within $\pm 0.5\%$. *Procedure for Zn*—To an aq. soln. (containing 20 to 200 mg of Zn) add 20% $(\text{NH}_4)_2\text{SO}_4$ (10 ml), 2 N H_2SO_4 (1 or 2 ml), 0.1 M $\text{K}_3\text{Fe}(\text{CN})_6$ (one drop) and 1% Variamine blue B soln. (0.2 to 0.5 ml), heat to 60° and titrate with 0.1 M $\text{K}_3\text{Fe}(\text{CN})_6$ until the violet colour is discharged. *Procedure for Pb*—For samples containing 0.1 to 1 g, proceed as for Zn, but with the use of formate buffer of pH 3 (10 ml) instead of $(\text{NH}_4)_2\text{SO}_4$ and H_2SO_4 . (Cf. also *Anal. Abstr.*, 1957, 4, 1457.)
A. R. ROGERS

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dm ————

ERDEY, L.

Research by means of derivative thermogravimetry. L. Erdely (Tech. Univ., Budapest). *Periodica Polytech.* 1, No. 1, 87-90 (1957). — The general field of thermal analysis was reviewed and advantages of simultaneous recording by differential thermal analysis, thermogravimetry, and derivative thermogravimetry by means of a combination app. were shown. Analysis of $KAl(SO_4)_2 \cdot 12H_2O$ showed that 4 mols. of H_2O were removed from the K ion at 70° , 3 from the Al ion at 100° , and 2 from the SO_4 ion at 180° . SO_4 was stripped from alumina at 760° . Thermal curves were shown for Zn anthranilate, magnesite, dolomite, hydrazinylite, boehmite, kaolinite, bauxite, and coals and other solid fuels. Decompos. temps. of Lewis bases showed a sequence which corresponded to base strength in the NH_4 halide series.

Joseph Bornstein

ppf

ERDEY, L.

25. Studies on high-temperature analytical reactions by the method of derivative thermogravimetry. (In German) L. Erdey. *Periodica Polytechnica, Chemical Engineering*, vol. 1, 1957, No. 2, pp. 91-104, 5 figs.

The combined methods of thermogravimetry, derivative thermogravimetry (DTG) and differential thermal analysis (DTA) are very suitable for studying high-temper-

ature reactions such as pyrolyses. Such reactions can be best interpreted by the Lewis electron theory. Valuable conclusions can be derived for the acid-base strength of the individual components of the reaction by evaluating the DTG and DTA curves. Several thermal decompositions can be explained by the change of the acid or base strength of the material in question under the influence of the temperature. From among systems containing protons, the thermal decomposition of ammonium salts, conversion of metal oxides by ammonium salts and the thermal decomposition of metal ammonium phosphates can easily be studied. The method is suitable for the examination of the processes of the following proton-free systems: difference between the thermal decomposition of dolomite and magnesite; the acid-base reactions occurring in the cryolite melt used in aluminum electrolysis and the processes of the decomposition of silicic acid and silicates with soda. The processes can be interpreted in terms of the electron theory.

ERDEY, I.

Report on the work of the Section of Chemical Sciences; also, remarks by M. Freund and others.

p. 169 (Kozlemenyel.) Budapest Vol. 8, no. 2/3 1957

SO: Monthly Index of East European Accessions (AEEI) Vol. 6, no. 11 November 1957

ERDEY, L.; BANYAI, E.; PAULIK, E.

"The use of precipitate exchange reactions in analytical chemistry." IV.

p. 103 (Kozlemenyel) Vol. 9, no. 1, 1957
Budapest, Hungary

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4
April 1958

ERDEY, L.

HUNGARY/Analytical Chemistry - Analysis of Inorganic Substances. E-2

Abs Jour: Referat Zhur-Khimiya, No 5, 1958, 14174.

Author : Erdelyi, L., Vigh K.

Inst : Hungarian Academy of Sciences

Title : Permanganatometric Determination of Vanadium in Ferrovandium After Reduction with Sodium Nitrite.

Orig Pub: Acta chim. Acad. sci. hung., 1957, 11, No 1-2, 73-83;
Magyar tud. akad. Kem. tud. oszt. kozl., 1956, 7, No 2,
277-285

Abstract: To the sample of ferrovanadium are added 50 ml H_2SO_4 (1:1) and 20 ml HNO_3 (1:3), evaporation is carried out until SO_3 vapors are formed, diluted with water to 200 ml, SiO_2 is separated and solution cooled to room temperature. Decomposition of ferrovanadium can also be effected by successive treatment with 50 ml H_2SO_4 (1:1) and 5-10 ml 30% H_2O_2 . To

Card : 1/2

HUNGARY/Analytical Chemistry - Analysis of Inorganic Substances. E-2

Abs Jour: Referat Zhur-Khimiya, No 5, 1958, 14174.

the resulting solution is added 1 g NaNO_2 , stirred, after 10 minutes 1.5 g of urea are added, heated to $60-70^\circ$ and titrated with 0.1 N solution of KMnO_4 . A control experiment is run concurrently. Satisfactory results were obtained.

Card : 2/2

ERDEY, L.

HUNGARY/Analytical Chemistry - Analysis of Inorganic Substances. E-2

Abs Jour: Referat Zhur-Khimiya, No 5, 1958, 14155.

Author : ~~Erdey L.~~, Karsai A.

Inst : Hungarian Academy of Sciences

Title : Indirect Method of Polarographic Determination of Calcium.

Orig Pub: Acta chim. Acad. sci. hu g., 1957, 11, No 1-2, 171-178.

Abstract: Description of a method for determining $6.3 \cdot 10^{-4}$ to $2 \cdot 10^{-2}$ mole/liter Ca, which is based on precipitation of Ca with bromanilic acid (I) and a subsequent determination of excess I, which is reduced polarographically at pH 4.5 and has an $E_{1/2} = 0.21$ v (in relation to a saturated calomel electrode). On carrying out the analysis 5 ml 0.1% solution of I are mixed with 0.5-4 ml of a solution of Ca and after 10 minutes are added 5 ml 1 M CH_3COOH containing 3 ml 2 M NH_4Cl in 50 ml solution; N_2 is passed for 5 minutes and polarography is carried out. Under the same condition the polarogram of

Card : 1/2

Some derivatives of Variamin Blue suited for use as oxidation-reduction indicators. ⁷ I. Erdely, E. Zalay, and E. Bodor (Tech. Univ., Budapest) *Acta Chim. Acad. Sci. Hung.* 12, 231-8 (1957) (in German). 4-Amino-4'-methoxydiphenylamine (I) forms a colorless aq. soln. which upon addn. of an oxidizing agent changes to a blue colored product (II) and eventually to a red colored quinone diimine (III). The potentiometric investigation of the dye indicated a reversible oxidation-reduction process. If a reducing agent is added to III it changes to II and eventually to the colorless soln. of I. In the solid form, I did not show any interesting properties. This excluded the presence of free radicals. Various substituted derivs. of the basic compound were prepared some of which showed the properties of indicators. In some cases the substituents caused a shift of the potential to more neg. values.

E. O. Forster

ERDEY, L.

16. Recent results of derivative thermogravimetry. (In German) E. Paulik, L. Erdey. *Acta Chimica Academiae Scientiarum Hungaricae*. Vol. 13, 1957, No. 1-2, pp. 117-140, 19 figs.

Investigations carried out so far by the method of derivative thermogravimetry proved that the derived curve facilitates the evaluation of the difficultly interpretable basic curves. Processes taking place in rapid sequences in the substance investigated or reactions causing very small losses of weight may readily be detected by this method with a high degree of sensitivity. The temperature of the maximum of the derived curve clearly defines the reaction under examination. If the values of the initial and final temperatures of the reaction are plotted on the basic curve precise stoichiometric calculation can be made. Very significant conclusions can be drawn from the comparison of the curves obtained by derivative thermogravimetry with those by differential thermoanalysis. Results of investigations by derivative thermogravimetry of various analytical precipitates, bauxites, alumina hydrates, red muds, erythrites and catalysts are discussed.

ERDEY, L.

7 21 7 29 8 May
 ✓ Chelatometric determination of zinc, cadmium, and lead
 in the presence of Variamine Blue as oxidation-reduction
 indicator. L. Erdy and L. Pólos (Tech. Hochschule,
 Budapest, Hung.). Anal. Chim. Acta 17, 468-69 (1957) (in
 German).—The end points in titrations of Zn^{++} , Cd^{++} , or
 Pb^{++} with ethylenediaminetetraacetic acid (EDTA) are
 found by means of the following principle: the oxidation-
 reduction couple $[Fe(CN)_6]^{4-} - [Fe(CN)_6]^{3-}$ assumes a
 different potential in the presence of the Zn^{++} , Cd^{++} , or
 Pb^{++} than otherwise, because these cations ppt. with $[Fe-$
 $(CN)_6]^{4-}$; if the pH of the soln. is 5, the oxidation-reduction
 indicator Variamine Blue (4-amino-4'-methoxydiphenyl-
 amine) assumes a violet color in this situation. Now as the
 EDTA removes the last of the cation being titrated, the
 liberation of $[Fe(CN)_6]^{4-}$ causes a sudden shift in oxidation-
 reduction potential which converts the Variamine Blue into
 its colorless form. Mg^{++} , Ba^{++} , Sr^{++} , and Ca^{++} do not
 interfere.
 A. L. Underwood

BERDEY, L.

161. Vanilmine blue as a colorimetric reagent.
III. The determination of vanadium and chromium.
Berdey and F. Szabadvary (Inst. of General
Chem. Tech. Univ. of Budapest). Magyar Kém.
Foly., 1957, 83 (3-7), 163-168. By using vanilmine
blue B as an indicator, in the pH range 1 to 4,
0.5 to 12 μg per ml of V and 0.2 to 4 μg per ml of
Cr (as chromate) can be determined photometri-
cally. The oxidation of V and Cr to the required
valency states is described. Iron, Cr and V can be
determined simultaneously by the same method.
The theory of these determinations and the effect
of interfering ions are discussed. A. G. Petro

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ERDEY, L.

Chem 2310. Determination of calcium ions by flame-
photometric titration. L. Erdey and G. Szabó
Inst. für Allgemeine Chem., Tech. Univ. Budapest,
Hungary. 2. 222. 1957, 184 (6), 400-413.
Concn. of Ca^{2+} in the range 0.001 to 0.1 M have
been determined with an accuracy of $\pm 2\%$ by
flame-photometric titration with standard H_3PO_4
soln. A Zeiss flame photometer with a modified
atomizer was used to follow the fall in concn. of
 Ca^{2+} . A graph relating galvanometer reading and
volume of H_3PO_4 added showed a distinct change of
slope at the equivalence point, especially when a
correction was applied for dilution. A. R. Roazze

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ERDEY, L.

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2476. Varianine blue as a colorimetric reagent.
 L. Erdely and F. Szabady, (Inst. für Allgemeine
 Chemie, Tech. Univ. Budapest), Z. anal. Chem.,
 1957, 185 (2), 90-94. — Varianine blue can be used
 for the colorimetric determination of many ions
 whose standard potential lies above that of the
 reagent, e.g., Fe^{3+} , Cr^{3+} , Mn^{2+} , V^{5+} , Ag^{+} , IO_3^{-} and
 I^{-} . Oxidation equivalents of different ions give the
 same extinction reading so that one calibration
 curve suffices. An eq. soln. of the reagent (0.5%)
 (2 to 5 ml) is added to the test soln. (0.5 to 10 mg
 equiv.) in water or alcohol. The extinction is
 measured after 5 min with a Pulfrich S57 filter
 (570 m μ). The mechanism of formation of the
 blue compound, the effect of changes of conditions,
 and interferences are discussed. A procedure is
 described for the estimation of Fe^{3+} , Mn^{2+} , Cr^{3+} and
 V^{5+} in the presence of each other. G. HUNGER

Handwritten signature

Distr: 4E2c

A study of potentiometric determination of gold(III) with ascorbic acid. L. Erdey and G. Rády (Tech. Univ., Budapest, Hung.). *Talanta* 1, 189-88 (1958).—A potentiometric method for the detn. of Au(III) with ascorbic acid is described. Ascorbic acid reduces Au(III) to metallic Au, and the titration is carried out at 60° between pH 1.6 and 3, in a chloride medium with a max. concn. of 0.1N. At the end point a considerable potential jump occurs. The accuracy of the method is about $\pm 1\%$ with 0.01N solns. Hg⁺⁺, Cu⁺⁺, and Fe⁺⁺⁺ ions do not interfere, but Pt(IV) causes a pos. error. The influence of a no. of factors such as temp. and pH on the accuracy are discussed.

Bella L. Rosenfeld

COUNTRY : Poland E-1
 CATEGORY :
 AES. JOUR. : RZKhim., No. 1959, No. 85967
 AUTHOR : Erdey, L.
 INST. :
 TITLE : Titration with the Use of Chemiluminescent Indicators.

ORIG. PUB. : Chem. analit., 1958, 3, No 3-4, 269-280

ABSTRACT : Chemiluminescent indicators (CI) are considered as redox systems; in the process of oxidation of CI the electrons which are in excited state, emit on transition to stable state, a portion of the energy in the form of a light quantum. In presence of CI, in alkaline solutions, spontaneous decomposition of H_2O_2 takes place. Beginning of reaction of CI which is associated with chemiluminescence, occurs on reaching a definite pH value of the solution, or on establishment of corresponding redox potential of the system. Therefore, CI are suitable for determining end-point of acid-base as well as oxidation-reduction titrations. The advantage of CI over indicators of other types is the

CARD: 1/3

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COUNTRY : Poland
CATEGORY :
ABS. JOUR. : RZKhim., No.

1959, No. 85467

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : fact that they make possible titration of turbid and colored solutions. As CI were studied lucigenin (dimethylacridyl nitrate) (I), luminol (hydrazide of 3-aminophthalic acid), lophin (2,4,5-triphenylimidazole), and siloxen. I has reversible indicator properties and is suitable for titration of strong and weak acids, and also of strong bases. In titration of acids or bases with the use of I as CI, 5 ml 3% H_2O_2 solution and 5 ml 0.05% solution of I are added to the solution being titrated, and titration is carried out in the dark, with alkali or acid, until the green glow of the solution vanishes. With the use of I, titrations of reducing agents with solutions

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COUNTRY : Poland E-1
 CATEGORY :
 ABS. JOUR. : RZKhim., No. 1959, No. 85967
 AUTHOR :
 INST. :
 TITLE :

ORIG. PUB. :

ABSTRACT : of H_2O_2 , and of oxidizing agents -- with solutions of $N_2H_4 \cdot H_2SO_4$, have also been developed. Luminol has no resersible indicator properties and can be used only for titration of acids with alkalies, in the presence of H_2O_2 and of catalysts, and also for titration of reducing agents with solutions of $NaClO$ or $NaBrO$. Lophin, analogous to luminol in mechanism of luminescence, is suitable for titration of strong and weak acids. Siloxen shows a red glow in the presence of strong oxidizing agents, and is recommended as CI in cerimetric, chromatometric, and permanganatometric titrations. A variant of automatic titration with the use of CI has been developed. -- A. Nemodruk.

CARD: 3/3

CZECHOSLOVAKIA/Physical Chemistry. Thermodynamics. Thermo-chemistry. Equilibria. Phase Transitions. Physical-Chemical Analysis.

B

Abs Jour: Ref Zhur-Khin., No 5, 1959, 14554.

Author : Erdey L.

Inst :

Title : An Application of the Differential Thermogravimetric Method.

Orig Pub: Chem. zvesti, 1958, 12, No 6, 352-365.

Abstract: Review and comparison of methods for differential thermic analysis, thermogravimetry and differential thermogravimetry. See also Ref Zhur-Khin., 1958, 52927-52930; 57132.

Card : 1/1

ERDEY, L.

Distr: 4E3d/4E3o

✓ Titrations in the presence of chemiluminescent indicators
 László Erdély, *Magyar Kém. Lapja* 13, 7-12 (1958); cf.
 Kertész and Kertész, *C.A.* 46, 9009g; 48, 497b. — *Lucigenin*,
 (10,10'-dimethyl-9,9'-biacridinium nitrate) luminesces in the
 presence of H_2O_2 above pH 8.6-9.4. Its 5% aq. soln. is
 used as an indicator in the titration of strong or weak acids
 with alkali in the presence of 5 ml. 3% H_2O_2 . Detailed
 exptl. procedures are described for the detn. of the acid-
 ity of milk, molasses, red wine, and fruit juices, and of the
 concn. of ascorbic, salicylic, acetylsalicylic acids, phos-
 phates, and carbonates. The mechanism of the reversible
 oxidation of the carbinol base by H_2O_2 via lucigenin peroxide
 and a triplet stage is described. Detailed instructions are
 given for the use of lucigenin to indicate the end point when
 $Fe(CN)_6^{4-}$, As^{3+} , ClO^- or BrO^- is titrated with 0.1N
 H_2O_2 in alk. soln. Standard deviations of not more than
 0.05% are obtained. The procedure for the use of lu-
 minol (5-amino-2,3-dihydro-1,4-phthalazinedione) in 0.01%
 alk. soln. to indicate the end point of the titration of As^{3+} ,
 Sb^{3+} , rhodamide, CN^- , $S_2O_3^{2-}$, S^{2-} with alk. $NaOBr$ or
 $NaOCl$ is described. *Lophin*, (2,4,5-triphenylimidazole) in
 0.45% alc. or 1% acetone soln. luminesces above pH 8.4-
 9.4 in the presence of 3% H_2O_2 and 3 ml. 5% $K_4Fe(CN)_6$.
 and is used as acid-base indicator. The author also ex-
 tends the use of *lucigenin* to oxidation-reduction titrations in-
 volving Tl^{3+} , Pb^{2+} , Mo^{6+} , I_2 , As^{3+} , $(COO)_2^{2-}$.
 Luminescence at the end point is observed either visually

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 1/1 in the dark or photometrically with a photomultiplier.
 Eva B. Richards

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Exdey, L.
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24. A photometric method of determining vanadium and chromium with Variamine Blue. (In German) J. Krtley, P. Szabady, *Acta Chimica Academiae Scientiarum Hungaricae*, Vol. 13, 1958, No. 3-4, pp. 335-345, 2 figs., 7 tabs.

Though several methods are known for the colorimetric determination of vanadium, they have the common fault that the specific extinction is small. Considerably better results can be obtained with Variamine Blue. Vanadium(V) may be reliably determined within the concentration range of 0.5-12 µg/ml whereas chromium in that of 0.2-4 µg/ml in the presence of each other in solutions of pH 1-4. Potassium permanganate is used for oxidizing vanadium and potassium persulphate for chromium, the excess of these reagents is removed before adding the Variamine Blue. In addition a simple colorimetric procedure is given for the determination of iron, vanadium and chromium in the presence of one another by means of Variamine Blue.

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Distr: hE2c(j)

23. Precipitate exchange reactions in analytical chemistry, IV*. (In German) L. Erdey, E. Bányai, P. Paulik. *Acta Chimica Academiae Scientiarum Hungaricae*. Vol. 13, 1958, No. 3-4, pp. 453-493, 8 tabs.

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Subsequent to the theoretic discussion of the exchange of chloride by mercury(II) iodate the practical conditions of the method of determination on this basis are discussed. Between certain limits of concentration the main reaction between mercury iodate and chloride ions proceeds without any side reactions. However in solutions of higher concentration a $HgCl_2^{+}$ complex whereas in solutions of lower concentration a $HgCl_4^{2-}$ complex forms in addition to $HgCl_2$. The formation of the $HgCl_4^{2-}$ complex liberated less iodate and that of the $HgCl_2^{+}$ complex, in turn, more iodate than expected on the basis of the main reaction. The determination of chloride may be carried out also on a micro scale in the presence of alcohol and under adequate conditions. Bromide, iodide and cyanide ions may be similarly determined in this way.

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JK

Country : HUNGARY
 Category : Analytical Chemistry. General Problems
 Abs. Jour : Ref Zhur - Khim., No 5, 1959, No. 15039
 Author : Erdey, L.; Banyai, E.; Zalay, E.; Tesy, M.
 Institut. : Hungarian Academy of Sciences
 Title : Preparation of Derivatives of Variamine Blue
 and Their Standard Oxidation-Reduction Potentials
 Orig Pub. : Acta chim. Acad. scient. hung., 1958, 15,
 No 1, 65-79
 Abstract : A description is given of the preparation of
 the following derivatives of variamine blue
 (I) which differ from I itself according to
 the value of the standard oxidation-reduction
 potential (SORP), and which can be used as
 oxidation-reduction indicators (ORI) as fol-
 lows: 4-amino-2-methyl-4'-methoxy-diphenyl-
 amine (II), 4-amino-4'-methoxy-diphenylamine-
 2-sulfo-acid (III), anilide of 4-amino-4'-
 methoxy-diphenylamine-2-sulfo-acid (IV),

Card: 1/6

Category	: Analytical Chemistry. General Problems
Abs. Jour	: Ref Zhur - Khim., No 5, 1959, No. 15039
Author	:
Institut.	:
Title	:
Orig Pub.	:
Abstract	: anisidid of 4-amino-4'-methoxy-diphenylamine-2-sulfo-acid (V), methyl ether of 4-amino-4'-methoxy-diphenylamine-2-sulfo-acid (VI), 2-amino-7-methoxy-phenothiazine-9-dioxide (VII), 4-amino-4'-methoxy-diphenylamine-2-carboxylic acid (VIII), anilide of 4-amino-4'-methoxy-diphenylamine-2-carboxylic acid (IX), methyl ether of 4-amino-4'-methoxy-diphenylamine-2-carboxylic acid (X), acridone-like compound (XI) and picrate of I (XII). XI is soluble in
Cont'd	
Card:	2/6
E - 6	

Country	HUNGARY	
Category	Analytical Chemistry. General Problems	E
Abstr. Jour.	Chem. Zvest. - Kilm., No. 1, 1959.	15039
Author	:	
Institution	:	
Title	:	
Orig. Pub.	:	
Abstract	: ethanol; II, VI, VII, IX and X - in ethanol and diluted HCl; III, IV, V and VIII - in ethanol, diluted HCl and alkali; XII - in ethanol, water and diluted HCl. Solutions of leuko compounds of the enumerated ORI are colorless or have a weak yellow color. During the action of oxidizers in an acid solution, ORI first give a blue or violet-blue, and then a red product of oxidation. All derivatives of I are suitable for the indication of oxidation-reduction	
Cont'd		
Card:	3/6	

Source:	WAB 122	E
Category:	Analitical Chemistry. General procedure.	
Ref. No.:	Ref. No. - Krasn. No. 1, 1954.	No. 15039
Author:		
Institution:		
Title:		
Orig. Pub.:		
Abstract:	: processes which take place in an acid medium.	
Cont'd	The end of titration is determined by the change from the colorless form of ORI to blue. III, IV, V, VI and VII possess a light-absorption curve with a maximum within 570-610 mμ. During oxidation of II, VIII, IX, X, XI and XII, forms are produced with a violet hue, and their maxima of light-absorption are between 500-530 mμ. At pH 2, I, II, IX and XII possess a stable oxidation-reduction potential (ORP);	
Page:	4/6	
E - 7		

Country	: HUNGARY	
Category	: Analytical Chemistry. General Problems	E
Abs. Jour	: Ref Zhur - Khim., No 5, 1959, No. 15039	
Author	:	
Institut.	:	
Title	:	
Orig. Pub.	:	
Abstract	: the color intensity of these ORI does not	
Cont'd	change in the course of 10 minutes. ORP of	
	III, IV, V, VI and VII slowly changes with	
	time; at the same time, a gradual weakening	
	occurs, followed by a disappearance of the	
	color. ORP of VIII, X and XI are very unstable.	
	Taking into account the instability of the ORP	
	of many derivatives of I, the authors consider	
	the ORI of II, III, IV, V, VI, VII, IX and XII	
	to be the most acceptable. The value of SORP	
Card:	5/6	

Country	: HUNGARY	
Category	: Analytical Chemistry. General Problems	E
Doc. Code	: Izv. Akad. Nauk - Khim., No 5, 1968,	No. 15039
Author	:	
Institution	:	
Title	:	
Orig. Publ.	:	
Abstract	: of the ORI studied depends on the pH. At pH 2,	
Cont'd	values of SORP for II-X and XII are equal, res-	
	pectively, to 553, 673, 669, 670, 678, 680,	
	692, 642, 693 and 587 mv. In the opinion of the	
	authors, the quoted values of SORP provide the	
	approximate characteristic of the intensity of	
	the attraction or repulsion of the electrons by	
	the corresponding substitutes. The number of	
	electrons which take part in the oxidation-re-	
	duction process for ORI, which are derivatives	
	of I, should be equal to 2.-- N. Polyanskiy	
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Erdey, L.

Distr: hE2c(j)

31. Titration of calcium using Eriochrome Red B Indicator. *L. Erdey, Magyar Kémiai Folyóirat, Vol. 64, 1958, No. 2, pp. 50-55, 1 fig., 12 tabs.*

Eriochrome Red B is suitable for indicating the end point of titrations in the presence of E.D.T.A. The indicator is a diazazo dye and forms complexes with many cations. These complexes are formed due to the action of the azo and hydroxyl groups and is accompanied with a sharp change of colour. When titrating metal ions in a suitably buffered solution by means of E.D.T.A. the formation of the complex may be used for indicating the end point. Titrations with Eriochrome Red B indicator can be best carried out in the pH range of 9 to 10; such values can be readily adjusted by means of $\text{NH}_4\text{OH}-\text{NH}_4\text{Cl}$ or boric acid-sodium hydroxide or borate-hydrochloric acid buffers. The titration of calcium ions may take place in these buffers by means of an E.D.T.A. (complexon III) solution; the indicator is 0.5 ml of a 0.6 g/100 ml aqueous Eriochrome Red B solution. At the point of equivalence the yellow colour of the indicator turns into blood-red.

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ERDEY, L.

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 ✓ Precipitate exchange reactions. L. Erdey and Eva
 Bányai (Tech. Univ., Budapest, Hung.). *Z. Anal. Chem.*
 181, 15-28 (1958).—On shaking a dil. soln. of an anion A with
 an excess of sparingly sol. solid KOx (Ox is a reducing or
 oxidizing agent that is easily detd.), exchange occurs with Ox
 going into soln. Equations are derived for predicting
 whether or not the exchange will be quant. For Cl^- , AgIO_3
 or $\text{Hg}(\text{IO}_3)_2$ is best. For SO_4^{--} , BaCrO_4 or $\text{Ba}(\text{IO}_3)_2$ is
 best. Ag_2CrO_4 or PbCrO_4 is used for S^{--} in an OAc^- buffer.
 Errors are caused by soly. of the ppts. and poor equil.
 K. G. Stone—

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L. Erdey

Distr: 4E3d

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Derivatographic microdistillation method for investigating liquid mixtures. ⁷ E. Paulik, L. Erdey, and S. Gal (Tech. Univ., Budapest, Hung.). *Z. anal. Chem.* 163, 321-9 (1958); cf. *C.A.* 52, 13325f. — The use of temp.-wt. curves and deriv. curves provides a complete description of the course of a distn. Mixts. studied were $C_6H_5-BtOH-H_2O$, Me_2CO-H_2O , $Me_2CO-BtOH$, $n-BuOH-H_2O$, $C_6H_5-n-BuOH-H_2O$, and aviation gasoline. Quant. analysis is simplified by using a 5-g. sample. ~~K. G. Stone~~

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ERDEY, L.

22. Indirect ascorbinometric determination of strongly oxidizing materials, I. (In German) L. ERDEY, I. BUDA, K. VIGH. *Periodica Polytechnica, Chemical Engineering*, Vol. 3, 1959, No. 1, pp. 1-16, 12 tabs.

Strongly oxidizing materials cannot be directly determined by means of ascorbic acid since the oxidation products of the latter (such as dehydroascorbic acid, 1-thronis acid and oxalic acid) inhibit an unambiguous course of the reaction. In such cases the use of intermediate oxidation-reduction systems, e. g. iron(II)—iron(III) or sometimes iodine—iodide systems, render possible the ascorbinometric determination of systems having strongly positive standard oxidation-reduction potentials. Iron(III) ions produced in quantities equal to the material under analysis can readily be found by means of ascorbic acid in the presence of potassium sulphocyanide indicator. Liberated iodine may also be measured by ascorbic acid in the pH range of 3 to 8 in the presence of Variamine Blue indicator. The method is suitable for determining the following ions or materials: ClO_3^- , ClO_2^- , $\text{C}_2\text{O}_4^{2-}$, BrO_3^- , Br_2 , H_2O_2 , $\text{S}_2\text{O}_8^{2-}$, $\text{Cr}_2\text{O}_7^{2-}$ and MnO_2 with an accuracy of a few tenths of per cent. The determination of nitrite ions may be effected by the use of potentiometric end point indication.

~~SECRET~~
5 4E2C
1-MJC/KD

77221

29

ERDEY, L.; MAZOR, L.; MEISEL.

Data on the microdetermination of the sulfur content in organic compounds. p.494.

MAGYAR KEMIKUSOK LAPJA. (Magyar Kemikusok Egyesulete) Budapest, Hungary.
Vol. 14, no. 12, Dec. 1959.

Monthly List of East European Accessions. (EEAI) LC Vol. 9, no. 2,
Feb. 1960 Uncl.

ERDEY, László

5
1-28 (NA)

Oxidation products of 4-amino-4'-methoxydiphenylamine.
Eva Bágyai, László Erdély, and Ferenc Szabadváry (Tech. Univ., Budapest). *Acta Chim. Acad. Sci. Hung.* 20, 307-20 (1969) (in German).—The polarographic waves and the absorption max. of 4-amino-4'-methoxydiphenylamine (I), of its oxidn. products, and of *N*-(*p*-anisyl)-*p*-benzoquinone diimine (II) proved that II formed in the 2-electronic oxidn. of I. By varying the pH value of the soln., II suffered a change of color, due to the proton affinity of the imino group. The degree of proton affinity of the imino group was established by an optical method and on the basis of the break points of the oxidn.-redn. potential: pH curves. The electrode potential of the oxidn.-redn. system proved to be pH dependent. In a slightly acidic medium, oxidn. took place through a semiquinone intermediate (III), as detd. by using the index potentials. In the oxidn.-redn. potential measurements, the oxidn. agents were: 0.01*N* Br-H₂O (in acidic soln.) or 0.01*N* K ferricyanide (in alk. soln.), resp. During the potentiometric oxidn. of I with Br-H₂O at pH 1-6, I gave at first a blue color. By adding Br-H₂O in an amt. corresponding to 2 electrons a violet color arose; and in the presence of strong oxidizing agents (Br-H₂O and Cl-H₂O in great excess), the soln. became red. Over pH 8 the oxidized soln. was continuously yellow.

At pH 1.5-5.5, the 2-electronic oxidn. went through the intermediate III, the stability of which was assured by mesomeric structures. In alk. soln. the oxidn. was direct. At pH 3, a protonated form of II (IV) presented an absorption max. at 580 mμ. The pH region 3-4 was the most favorable for IV (25%). The 2-electronic oxidn. product of I was violet in acidic soln. (absorption max. at 540 mμ), red close to pH 7 (max. at 480 and 540 mμ), and yellow in alk. soln. (max. at 480 mμ); consequently the red color was an mixed one. By polarographic and optical methods, this oxidn. product proved to be II. The color change was explained as follows: in alk. soln., II exists as a yellow base; in acidic soln., however, by taking up a proton, II can exist in the two violet mesomeric forms of IV. The overoxidized product arising from the action of Cl-H₂O contained 3.1% N, no Br; and, probably, it was decompd. Below pH 1, the violet IV became colorless by decompn. into *N*-(*p*-anisyl)-*p*-benzoquinone imine and NH₃. In weakly acidic medium I took up only one proton, probably on the primary amino group. Over the pH range 1-6, therefore, both the oxidized and the reduced forms of I may exist as univalent cations.

E. Kasztreiner

ERDEY, Laszlo, Prof.Dr.(Budapest); PAULIK, Ferenc (Budapest)

Derivatographic investigation of bauxites; thermic decomposition
of hydrargillite. In German. Acta chimica Hung. 21 no.2:205-218
'59. (HAI 9:4)

1. Institute of General Chemistry, Technical University, Budapest.
(Bauxite) (Gibbsite)

ERDEY, László, Prof.Dr. (Budapest XI. Gellert ter 4.); GYIMESI, József
(Budapest XI. Gellert ter 4.); MÉRISZ, Tibor (Budapest XI. Gellert
ter. 4)

Preparation of some new complex forming compounds and determination
of their constants. In German. Acta chimica Hung. 21 no.3:327-332 '59.
(KKA I 9:5)

1. Institute of General Chemistry, Technical University, Budapest.
(Complex compounds) (Dissociation)

ERDEY, L.

Distr: 4E2c(j)/4E3d

204/80.

543.244.6-4

Preparation of some new complexing agents and the determination of their properties, L. Erdey, J. Gyimesi, T. Meisai. Magyar Kémiai Folyóirat, Vol. 66, 1989, No. 10, pp. 386-388, 3 figs.

4
1-JAJ(N3)
2

Complexing properties were expected on the basis of practical considerations from the following compounds: DL-2,3-dihydroxypropylamine-N-diacetic acid, DL-serine-N-diacetic acid sodium salt and L-glutamic-N-diacetic acid

disodium salt. These compounds were prepared and the dissociation constants as well as the stabilities of the alkaline-earth metal complexes of the analyzed pure materials were determined. It was found that the stability of the alkaline-earth metal complexes of DL-2,3-dihydroxypropylamine-N-diacetic acid was higher than that of complexes derived from the similarly dibasic aminodiacetic acid. The stability of the complexes of DL-serine-N-diacetic acid is higher by about one order of magnitude than the complex stabilities of the former compound. The stabilities of the complexes of L-glutamic-N-diacetic acid are in good agreement with the corresponding values of the aminomalonic-N-diacetic complexes. The prepared new compounds were examined also as auxiliary complexing agents, by adding them in various molar proportions to solutions of Zn^{2+} , Pb^{2+} , Cu^{2+} , Ni^{2+} and Al^{3+} ions. The experiments showed that the complexing properties of the prepared compounds were inferior to those of ethylenediamine tetraacetic or nitrilotriacetic acids. Consequently the field of application of these compounds is limited, they can be used only as auxiliary complexing agents.

92
11
68

Distr: hE2c

Titration With Hydrogen Peroxide and Sodium Hypobromite Solutions. L. Erdey
and J. Inczedy (Tech. Univ., Budapest, Hung.). Z. anal. Chem. 166, 410-17 (1959).
--The change from weakly green $\text{Ni}(\text{OH})_2$ to black $\text{Ni}(\text{OH})_3$ can be used as an indicator
for titrations with 0.1 or 0.01N OBr^- solns. in weakly basic soln. To det. OBr^- , add
3 drops 5% NiSO_4 soln. (I) and titrate with 0.1N H_2O_2 to the disappearance of the
black color. To det. S in steel dis-place H_2S with HCl in a Schulte app., catch the
 H_2S in NaOH, oxidize S^{--} to SO_4^{--} with excess OBr^- , and det. the excess with H_2O_2 .
 NH_4 salts are detd. by oxidizing NH_4^+ to N with excess OBr^- and detg. the excess with
 H_2O_2 . OCl^- is detd. by adding KBr and titrating with H_2O_2 and add 3 drops I as indi-
cator. As^{+++} , S^{--} , SO_3^{--} , and $\text{S}_2\text{O}_3^{--}$ can be titrated directly with OBr^- soln. in 0.1-
1N NaOH and 6-8 drops I as indicator. K. G. Stone

(Retyped clipped abstract)
Card 1/1

ERDEY, Laszlo, r.tag, akademikus

The situation of analytical chemistry and the main trends of its
development. Kem tud kozl MTA 14 no.2:213-226 '60. (EBAI 10:2)
(Hungary--Chemistry, Analytic)
(Hungarian Academy of Sciences)

~~ERDEY, L.~~ prof. (Budapest XI Gellert ter 4); POLOS, L. (Budapest XI Gellert ter 4)

Contributions to the iodometric end point indication. Periodica
polytechn chem 4 no.2:157-162 '60. (EEAI 10:4)

1. Institut fur Allgemeine Chemie der Technischen Universitat,
Budapest.

(Iodometry) (Potassium iodide)

ERDEY, A.

✓ Derivatographic study of potassium hydrogen phthalate.
R. Belcher, L. Erdey, F. Pauk, and G. Liptay (Tech.
Univ. Budapest, Hung.). *Talanta* 8, 53-7 (1960). Deriva-
tographic measurements showed that the decompn. of C_6H_4 -
COOHCOOK, which is often used as a primary standard,
begins at 190-200°. The nonhygroscopic prepn. can be
dried at 160-180°. Decompn. proceeds in 3 steps, the rate
depending on the rate of increase of temp. $C_6H_4(COOK)_2$ is
formed first, phthalic anhydride and water being removed.
Enthalpy changes also can be obtained from the derivato-
grams; this yields information on the further mechanism of
thermal decompn. and changes of state of the sample.
Bella L. Rosenfeld

6
JAJ(NB)

ERDEY, Laszlo; GYIMESI, Jozsef; MEISEL, Tibor

Synthesis of some new complex-forming compounds and
determination of their constants. Magy kem folyoir 65 no.
10:386-388 0 '59.

1. Budapesti Muszaki Egyetem Altalanos Kemiai Tanszeke.
2. "Magyar Kemiai Folyoirat" szerkeszto bizottsagi tagja.

ERDEY, L., prof. (Budapest XI., Gellert ter 4); LIPTAY, G. (Budapest XI.,
Gellert ter 4); GAL, S. (Budapest XI., Gellert ter 4); PAULIN, R. /
(Budapest XI., Gellert ter 4)

Derivatographic investigation of ammonium phosphate precipitations.
Periodica polytechn chem 5 no.3:209-217 '61.

1. Lehrstuhl für Allgemeine Chemie, Technische Universität.

ERDEY, L., prof. (Budapest XI., Gellert ter 4); LIPTAY, G. (Budapest XI., Gellert ter 4); GAL, S. (Budapest XI., Gellert ter 4); PAULIK, F. (Budapest XI., Gellert ter 4)

Thermal investigation of iron (III) hydroxy precipitations.
Periodica polytechn chem 5 no.4:287-303 '61.

1. Lehrstuhl fur Allgemeine Chemie, Technische Universitat, Budapest. 2. Editorial Board member, "Periodica Polytechnica; Chemical Engineering" (for Erdey).

ERDEY, L., prof.dr. (Budapest XI., Gellert ter 4)

"Progress in nuclear energy - analytical chemistry. Editor
M.T. Kelley. Reviewed by Prof., dr. L. Erdey. Periodica
polytechn chem 5 no.4:360 '61.

1. Lehrstuhl für Allgemeine Chemie, Technische Universität,
and Editorial Board member, "Periodica Polytechnica; Chemical
Engineering."

ERDEV, László, prof., dr. (Budapest XI, Gellert ter. 4); GIMESI, Otto (Budapest XI, Gellert ter. 4); RADY, György (Budapest XI, Gellert ter. 4)

Determination of elementary sulfur in nonaqueous medium. Acta chimica Hung 28 no.1/3:179-185 '61. (EEAI 10:9)

1. Institut für Allgemeine Chemie der Technischen Universität, Budapest.

(Sulfur) (Benzene) (Acetone) (Cyanides)

RADY, Gyorgy (Budapest XI, Gellertter 4); GIMESI, Otto (Budapest XI, Gellertter 4);
ERDEY, László, prof., dr. (Budapest XI, Gellertter 4)

Determination of the total content of lead and lead oxide in lead
chromate. Acta chimica Hung 28 no.1/3:237-242 '61.
(EEAI 10:9)

1. Institut für Allgemeine Chemie der Technischen Universität, Budapest.

(Lead) (Lead oxides) (Lead chromate)

~~ERDEY, L.~~ prof. (Budapest, XI., Gellert ter 4); INCZEDY, J. (Budapest,
XI., Gellert ter 4)

The role of perhydroxyl ions in the reactions of hydrogen
peroxide. Periodica polytechnica chem 6 no.4:195-202 '62.

1. Department for General Chemistry, Technical University,
Budapest.

G/002/62/000/009/001/001
D287/D307

AUTHOR: Paulik, Ferenc, Paulik, Jenő and Erdey, Laszlo

TITLE: Derivatography

PERIODICAL: Chemische technik, no. 9, 1962, 533-537

TEXT: The derivatograph, constructed by the authors, is an automatic recording device for the thermal analysis of solid or liquid samples. Weight changes due to heat and the rate at which these changes proceed and the variations in the enthalpy and the temperature of one sample are recorded simultaneously. The relationship between the chemical composition and the crystalline structure of substances can be determined with a higher degree of accuracy than with hitherto used methods; thermal reactions within the sample can also be elucidated by this method. Derivatograms give results obtained during tests on bauxite samples and during the microdistillation of water. The authors refer briefly to previous investigations on minerals, ores, solid fuels and building materials, on the heat-sensitivity of catalysts and thermal proper-

Card 1/2

Derivatography

G/002/62/000/009/001/001
D287/D307

ties of synthetics and state that the method should also give satisfactory results during the analysis of multi-component solvent mixtures, ethereal oils and other valuable organic compounds. A detailed description of the apparatus is included. There are 8 figures.

ASSOCIATION: Institut für Allgemeine Chemie der Technischen Universität, Budapest (Institute for General Chemistry, Technical University, Budapest)

SUBMITTED: March 13, 1962

Card 2/2

ERDEY, László; GEGUS, Erno; T. VANDORFFY, Maria

Analysis of natural waters by high-frequency titration. Magyar
kem lap 17 no.6:277-281 Je '62.

1. Budapesti Műszaki Egyetem Általános Kémiai Tanszék.

BECK, Mihaly; BITE, Pal; BRUCKNER, Gyozo; CSENTES, Jozsef; CSUROS, Zoltan;
DEAK, Gyula; ERDEY-GRUZ, Tibor; ERDEY, ~~Laszlo~~; FABIAN, Pal;
FINALY, Istvan; FODOR, Gabor; FODORNE CSANYI, Pirooska;
GYORBIRO, Karoly; INZELT, Istvan; KUCSMAN Arpad; NEUMANN, Erno;
PUNGOR, Erno; SCHNEER, Anna; SCHULEK, Elemer; SZABADVARY, Ferenc

Rules for the Hungarian chemical nomenclature and orthography.
Kem tud kozl MTA 17 no.1/4:1-292 '62.

1. "A Magyar Tudomanyos Akademia Kemiai Tudomanyok Osztalyanak Kozlemenyei" szerkeszto bizottsagi tagja (for Bruckner, Csuros, Laszlo Erdey, G.Fodor, and Schulek). 2. "A Magyar Tudomanyos Akademia Kemiai Tudomanyok Osztalyanak Kozlemenyei" szerkesztoje (for Erdey-Gruz). 3. "A Magyar Tudomanyos Akademia Kemiai Tudomanyok Osztalyanak Kozlemenyei" technikai szerkesztoje (for Finaly). 4. Muvelodesugyi Miniszterium (for Csentes). 5. Magyar Tudomanyos Akademia Helyesitasi Bizottsage (for Fabian). 6. Nehezipari Miniszterium (for Neumann).

ERDEY-GRUZ, Tibor, akademikus; BRUCKNER, Gyozo, akademikus; LENGYEL, Bela;
TELEGDY-KOVATS, Laszlo, a tudomanyok doktora; HARDY, Gyula,
kandidatus; GERECS, Arpad, akademikus; FOLDI, Zoltan; WOLKÖBER,
Zoltan; TUDOS, Ferenc, kandidatus; PURMAN, Jenő; KRAUSZ, Imre,
kandidatus; ERDEY, Laszlo, akademikus; SCHAY, Geza, akademikus

An account of the 1961 work of the Section of Chemical Sciences,
Hungarian Academy of Sciences. Kem tud kozl 18 no.3:343-394
'62.

1. Magyar Tudomanyos Akademia Kemiai Tudomanyok Osztalyanak titkara,
es "A Magyar Tudomanyos Akademia Kemiai Tudomanyok Osztalyanak
Kozlemenyei" szerkesztoje (for Erdey-Gruz). 2. Akademiai levelezo
tag (for Lengyel and Foldi). 3. "A Magyar Tudomanyos Akademia
Kemiai Tudomanyok Osztalyanak Kozlemenyei" szerkeszto bizottsagi
tagja (for Bruckner, Erdey, Foldi, Gerecs, Hardy, Lengyel, Schay,
Tudos).

ERDEY, Laszlo, prof., dr. (Budapest, XI., Gellert ter 4); RADY, Gyorgy,
dr. (Budapest, XI., Gellert ter 4); GIMESI, Otto (Budapest, XI.,
Gellert ter 4)

Analysis of lead-containing silver alloys. Acta chimica Hung
32 no.2:151-157 '62.

1. Institut für Allgemeine Chemie der Technischen Universität,
Budapest. 2. Mitglied der Redaktion, "Acta Chimica Academiae
Scientiarum Hungaricae" (for Erdey).

ERDEY, L., prof., dr. (Budapest, XI., Gellert ter 4); PAULIK,
F. (Budapest, XI., Gellert ter 4); PAULIK, J.
(Budapest, XI., Gellert ter 4);

Normalizing the conditions in thermoanalytical experiments
by means of a derivatograph. Periodica polytechnica 7
no. 3: 171-175 '63

1. Lehrstuhl für Allgemeine Chemie, Technische Universität,
Budapest.
2. Mitglied, Redaktionskollegium, "Periodica Polytechnica-
Chemical Engineering." (for Erdey).

ERDEY, L., prof., dr. (Budapest, XI., Gellert ter 4); LIPTAY, G. (Budapest, XI., Gellert ter 4); PAULIK, F. (Budapest, XI., Gellert ter 4);

Determination of clacite, magnesite and dolomite in presence of each other by means of a derivatograph. Periodica polytechn chem 7 no. 3: 177-184 '63

1. Lehrstuhl fur Allgemeine Chemie, Technische Universitat, Budapest.
2. Mitglied, Redaktionskollegium, "Periodica Polytechnica-Chemical Engineering". (for Erdey).

~~ERDEY, L.,~~ prof. (Budapest, XI., Gellert ter 4); LIPTAY, G.
(Budapest, XI., Gellert ter 4);

Derivatographic investigation of metal anthranilate precipitates. Periodica polytechn chem 7 no. 3: 185-204 '63

1. Lehrstuhl für Allgemeine Chemie, Technische Universität, Budapest.
2. Mitglied, Redaktionskollegium, "Periodica Polytechnica-Chemical Engineering" (for Erdey).

ERDEY, L.; prof. (Budapest, XI., Gellert ter 4); GAL, S.
(Budapest, XI., Gellert ter 4)

Thermoanalysis of natural and synthetic cryolite.
Periodica polytechn chem 7 no. 3: 205-214 '63

1. Lehrstuhl für Allgemeine Chemie, Technische Universität,
Budapest.
2. Mitglied, Redaktionskollegium, "Periodica Polytechnica-
Chemical Engineering" (for Erdey).

ERDEY, L., prof. (Budapest, XI., Gellert ter 4); GAL, S.
(Budapest, XI., Gellert ter 4); PAULIK F. (Budapest,
XI., Gellert ter 4); BAUER, J. (Budapest, XI., Gellert
ter 4);

Derivatographic analysis of calcium oxalate hydrates.
Periodica polytechn chem 7 no. 3: 215-22 '63

1. Lehrstuhl fur Allgemeine Chemie, Technische Universitat,
Budapest (for Erdey, Gal and Paulik).
2. Chemische Fabrik Gedeon Richter, Kobanya (for Bayer).
2. Mitglied, Redaktionskollegium, "Periodica Polytechnica-
Chemical Engineering" (for Erdey).

ERDEY, L., prof. (Budapest, XI., Gellert ter 4); LIPTAY, G.
(Budapest, XI., Gellert ter 4)

Derivatographic study of metal pyridine rhodanide precipitates. Periodica polytechnica chem 7 no. 3: 223-236 '63

1. Department for General Chemistry, Polytechnical University of Budapest.
2. Editorial Board member, "Periodica Polytechnica-Chemical Engineering" (for Erdey).

ERDEY, Laszlo, akadémikus

An account of the 3d All-Union Conference on Thermography. Kem
tud kozl MTA 19 no.3:355-356 '63.

1. Budapesti Műszaki Egyetem Általános Kémiai Tanszéke; "a Ma-
gyar Tudományos Akadémia Kémiai Tudományok Osztályának Koz-
lemenyei" szerkesztő bizottsági tagja.

VIGH, Katalin; INCZEDY, Janos; ERDEY, Laszlo

Determination of phosphorus content of steel, crude iron and ferro-vanadium by the ion exchange resin column. Magy kem folyoir 69 no.2: 73-75 F '63.

1. Budapesti Muszaki Egyetem Altalanos Kemiai Tanszeke. 2. "Magyar Kemiai Folyoirat" szerkeszto bizottsagi tagja (for Erdey).

ERDEY, Laszlo; KOCIS, Elemor; TAKACS, Jozsef

Air drying by silica gel. Épületgépészet 12 no.3/4:68-72 Jé '63.

1. Budapesti Műszaki Egyetem Általános Kémiai Tanszék.

ERDEY, Laszlo, prof., dr. (Budapest, XI., Gellert ter 4); VANDORFFY,
MARIA T. (Mrs), dr. (Budapest, XI., Gellert ter 4)

High-frequency titrations with ascorbic acid as volumetric
solution. Acta chimica Hung 35 no.4:381-389 '63.

1. Institut für Allgemeine Chemie der Technischen Universität,
Budapest. 2. Mitglied, Redaktionskollegium, "Acta Chimica
Academiae Hungaricae" (for Erdey).

ERDEY, Laszlo, prof., dr. (Budapest, XI., Gellert ter 4); TESY-VANDORFFY,
Maria (Mrs) (Budapest, XI., Gellert ter 4)

High-frequency titrations with ascorbic acid as standard
solution. Pt. 2. Acta chimica Hung 37 no.1:17-26 '63.

1. Institut für Allgemeine Chemie der Technischen Universität,
Budapest; Mitglied, Redaktionskollegium, "Acta Chimica Academiae
Scientiarum Hungaricae" (for Erdey).

ERDEY, L.

"Electrochemical reactions; the electrochemical methods of analysis" by G. Charlot, J. Badoz-Lambling, B. Tremillon. Reviewed L. Erdey. Acta chimica Hung 38 no.2:169-170 '63.

1. Mitglied, Redaktionskollegium, "Acta Chimica Academiae Scientiarum Hungaricae."

GYMESI, Otto (Budapest, XI., Gellert ter 4); RADY, Gyorgy, dr. (Budapest, XI., Gellert ter 4); ERDEY, Laszlo, Dr. prof. (Budapest, XI, Gellert Teru)

Determination of alkali cyanides and selenium by sulphur volumetric solution in nonaqueous medium. Acta chimica Hung 38 no.4:303-309 '63.

1. Institut fur Allgemeine Chemie der Technischen Universitat, Budapest.

PAULIK, Ferenc (Budapest, XI., Gellert ter 4); BUZAGH, Eva (Mrs);
(Budapest, XI., Gellert ter 4); POLCS, Laszlo (Budapest, XI.,
Gellert ter 4); ERDEY, Laszlo dr., prof. (Budapest, XI., Gellert
ter 4).

Derivatographic analysis of barium sulfate precipitates.
Pt.1. Acta chimica Hung 38 no.4:311-323 '63.

1. Institut fur Allgemeine Chemie der Technischen Universitat,
Budapest.

KASA, Imre (Budapest, XI., Gellert ter 4); ERDEY, Laszlo, prof., dr.
(Budapest, XI., Gellert ter 4)

Determination of semicarbazide through oxidation in an alkaline solution. Acta chimica Hung 39 no.1:21-25 '63.

1. Institut fur Allgemeine Chemie der Technischen Universitat,
Budapest.

CSUROS, Zoltar; PETRO, Jozsef; KALICH, Vince; ERDEY, Iasz; PAULIK, Ferenc

Changes in the catalytic properties of Raney nickel depending on the conditions of its preparation. Magyar Kemiai Folyoirat no.8:337-348 Ag '64.

1. Chair of Organic Chemical Technology of the Budapest Technical University. 2. Editorial board member, "Magyar Kemiai Folyoirat", Budapest (for Erdy).

KOROS, Endre; PAULIK, Ferenc; ERDEY, Laszlo; RUFF, Ferenc

Thermal decomposition of some cobalt (II)-pyrazine mixed complexes. Magy kem folyoir 70 no.11:468-474 N '64.

1. Chair of Inorganic and Analytic Chemistry, Lorand Eotvos University, Budapest, Chair of General Chemistry, Budapest Technical University, and Chair of Organic Chemistry, Lorand Eotvos University, Budapest. 2. Editorial board member, "Magyar Kemiai Folyoirat" (for Erdey).

ERDEY, László; KANTOR, Tibor; KOCSIS, Elemér; TESZYÉ VANDORFFY, Mária

Quantitative spectrum analysis of metal layers produced by vacuum evaporation. Magyar kémiai folyóirat 70 no.12:557-559 D '64.

1. Chair of General Chemistry of the Budapest Technical University. 2. Editorial Board Member, "Magyar Kémiai Folyóirat" (for Erdey).